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ABSTRACT

As the implementation of year-round programs in school districts accelerates, the conceptual, promotional, and testimonial literature continues to keep pace. Empirical research on the subject, however, is lagging. The research available consists of feasibility studies, evaluation reports of implemented projects, dissertations, and isolated independent studies. Analysis of this research indicates a preoccupation with the educational and financial aspects of year-round programs. Costs, attitudes, and educational achievement are the most frequently considered variables in feasibility studies and evaluation reports. Dissertations cover a broad range of educational subjects, including planning, administrative tasks, characteristics of school districts sponsoring year-round programs, and curriculum change. A model developed to present the systematic impact of changes in school calendars on various societal institutions is the framework for this research literature review. (Author/MLF)

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Research on Year-round Education

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RESEARCH ON YEAR-ROUND EDUCATION

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A limited amount of research is available on YRE. As the implementation of programs in school districts accelerates, the conceptual, promotional, and testimonial literature continues to keep pace. Empirical research on the subject, however, is lagging.

The research available consists of feasibility studies, evaluation reports of implemented projects, dissertations, and isolated independent studies. Analysis of this research indicates a preoccupation with the educational and financial aspects of year-round programs. Costs, attitudes, and educational achievement are the most frequently considered variables in feasibility studies and evaluation reports. Dissertations cover a broad range of educational subjects, including planning, administrative tasks, characteristics of school districts with YRE programs, and curriculum change. Independent studies include a survey of the effects of YRE on family life style, a national survey of state department activity in YRE, and a delphi study of the benefits and liabilities of YRE programs.

A Research Model

The literature on year-round education during the late 1960's and early 1970's contains exhortatory reports promoting the installation of year-round school calendars. Some of this literature was written to further commercial interests, particularly those of air conditioning firms. A recent change in

the literature, however, reflects the concern for careful evaluation and study of the effects of year-round schools.

The model in Figure 1 was developed in response to the need for research on year-round programs and is an attempt to present the systematic impact of changes in school calendar on the various institutions of our society. This model has guided research at the National Institute for the Study of Year-round Education at Virginia Tech and is the framework for the presentation of this review of research literature on year-round education.

Year-round Programs Reviewed in This Survey of Literature

Table 1, taken from Bruce Campbell's study, indicates the number and types of year-round programs in the United States. The 45-15 program leads the pack with 22 programs operational and 17 in various stages of study and planning. The voluntary four-quarter is second with nine operational programs and seven in the pipeline. The third is the quinmester program with three operational and three under study.

The programs emphasized in this review of research are the 45-15 and quinmester. These are the programs for which data are most readily available. Evaluation reports for six of the 45-15 programs and two of the quinmester programs were available through the National Council on Year-round Education which has the most comprehensive collection of reports available today. The six 45-15 programs included are those of Chula Vista, California; Northview, Michigan; La Mesa-Spring Valley, California, Francis Howell School District, Missouri, Prince William County, Virginia, and Valley View, Illinois. The two quinmester programs are Dade County, Florida; and Tri-districts (Okemos, East Lansing, Haslett), Michigan.

TABLE 1

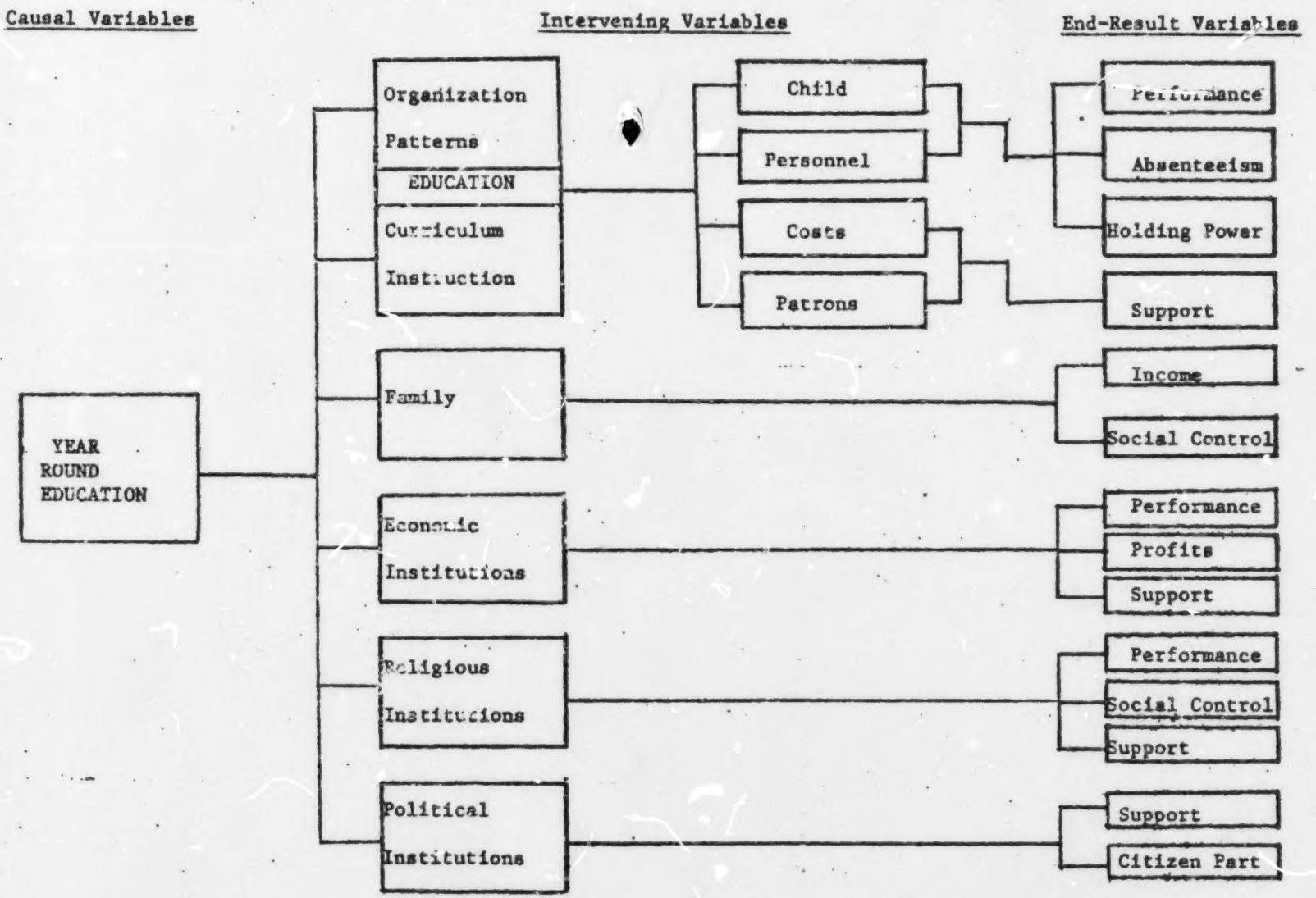
Type of Plan

	Total	Operational	Study/ Planning
1. Voluntary 4-quarter	16	9	7
2. 4-quarter 50-15	1	1	
3. 45-15	39	22	17
4. 45-15 block	1	1	
5. Staggered attendance	5		5
6. Flexible	3	2	1
7. Quinimester	6	3	3
8. Trimester	2	0 (1)	
9. Extended summer session	2	1	1
10. 6-term plus summer	1		1
11. Continuous progress	3	2	1
12. 4-1-4-1	2	1	1
13. Not yet determined/under study	6		6
14. Not indicated	15		15
		42	

(1) Operational but recently abandoned (Florida)

FIGURE 1

A RESEARCH NEEDS IDENTIFICATION MODEL FOR YEAR-ROUND EDUCATION



A brief description of the 45-15 and quinmester programs is in order. The staggered 45-15 mandated program divides an attendance area into four sections. Students from each section comprise a color calendar group--red, blue, yellow, green. If the red group starts school September 1, it continues for 45 days then has 15 days vacation. It continues in this 45-15 day cycle until students have had the minimum of 130 days of instruction. Each of the other groups starts 15 days after the preceding group, thus staggering the starting dates and vacations of each group. At any one time after all groups have started, only 75 percent of the student body will be in attendance. Figure 2 illustrates the staggered 45-15 program.

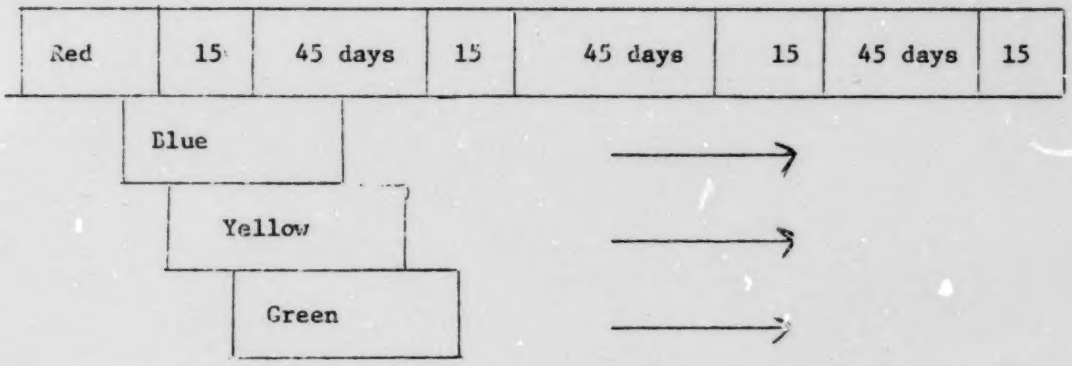
The quinmester program divides the school year into five sections of nine weeks each. The student can select any four of the five sections (quins). This program, as reported by Dade County and Tri-districts, is voluntary. Figure 2 illustrates the typical voluntary quinmester program.

Effects of YRE Programs on Curriculum and Instruction

Quinmester - The curriculum in the two quinmester programs reviewed was divided into 9 week courses. Dade County's Curriculum Bulletin 10 listed 1300 separate courses. A major problem was the availability of resources, both teachers and materials, to provide this many courses. A rule of thumb recommended by the Dade County evaluation report was to offer no more courses than one and one-half times the number of faculty in any one department. Because the State of Florida limited use of textbook funds for supplemental materials to 10 percent of the textbook budget, necessary materials were not always available.

Figure 2: 45-15 and Quinmester Calendars

45-15 (Mandatory)



Quinmester (Voluntary)

9 weeks	9 weeks	9 weeks	9 weeks	9 weeks

Participation in extra-curricular activities was reported as a problem by those Dade County students planning to graduate early. Reduced participation can be expected as the number planning early graduation increases.

Some indication of use of new instructional techniques was reported by 44 percent of the students participating in the fifth quin of the Tri-districts program. Thirty-seven percent of these students also reported higher teacher enthusiasm; 50 percent reported the same teacher enthusiasm encountered during the other quins.

45-15 - The curriculum in the year-round schools of Prince William County and Chula Vista was segmented into 3-week units in some schools and 9-week units in others. Accompanying the 3-week segmentation in the elementary schools of Prince William County was the movement away from subject-centered curriculum to broad fields and integrated or correlated curriculum. Curriculum guides were developed by five released teachers in language arts, math, and themes. Themes consisted of integrated units covering physical education, music, art, social studies, science, and health.

The media center became an integral part of the varied instructional modes used by teachers. At the middle school level in Prince William County, teaming, modular scheduling, multi-age grouping, multiple texts, themes, contracts, self-instructional packages, simulation, inquiry, and co-educational industrial arts and home economics classes were the vehicles delivering the performance based curriculum. When asked if there were a wider variety of educational programs offered under the 45-15 plan, 77 percent of the teachers, students, parents, administrators, and classified personnel responding to a questionnaire administered by the La Mesa-Spring Valley School District responded positively.

Although Becky-David and Valley View did not have curriculum change as an objective, the impact of the 45-15 calendar change was felt. Administrators from Valley View reported that the calendar change pressed them into considering team teaching, open space, and individualized instruction. The Becky-David evaluation report of September, 1970, indicated some difficulty with maintaining grouping procedures in their ungraded program. Teachers also complained that their classes contained too many levels for them to be effective. On a survey, 36.2 percent of the participating Becky-David teachers stated that the 45-15 plan hindered the ungraded structure; 44.7 percent said that it helped learning; 10.6 percent said it hindered learning; and 26.5 indicated no change in learning.

Effects of YRE Programs on Organizational Patterns

Quinmester - Since no additional staff were added in Dade County, with the exception of one clerk for each of the 19 participating schools, the roles of teachers, administrators, and guidance counselors were significantly altered. Teachers taught a greater variety of courses and had some difficulty staying within their areas of certification. They experienced some dissatisfaction with student-teacher relationships due to rescheduling every nine weeks. Teachers also spent more time providing course guidance on an informal basis to students, planning, and record keeping. Guidance counselors experienced heavy loads due to increased demands by students for course guidance. Administrators were required to spend additional time on preparing and publishing curriculum catalogs and student-parent information bulletins, student scheduling, curriculum evaluation, program planning, and staff development.

The voluntary quinmester program is little more than the traditional summer school tacked on the end of the school year. This is exposed by a review of the reasons given by students for enrolling in Dade County's fifth quin: 42 percent remediation, 34 percent acceleration, 14 percent enrichment, 7 percent vacation in another quin, 3 percent other. With the exception of the 7 percent who prefer to vacation in another quin, the other 93 percent gave the traditional reasons for attending summer school. Results from the Tri-districts program differed somewhat. When asked their future plans after completing the fifth quin, students replied: 40 percent acceleration, 25 percent take reduced load or no load and work during another quin, 18 percent take reduced load or no load and loaf or vacation during another quin, 15 percent begin vocational training. In this case, 33 percent would take a reduced or no load during another quin. The numbers, however, are so small that economies from plant utilization could not be effected.

45-15 - The evaluation reports reveal that Becky-David was the only project to add secretarial positions to handle the additional administrative burden. Both teachers and administrators experienced additions and changes in roles. Teachers at Godwin Middle School, Prince William County, were assigned advisees; at Valley View, La Mesa-Spring Valley, and Chula Vista, they were shifted from room to room requiring supply and equipment transfers; in Valley View, Prince William County, Chula Vista, and La-Mesa-Spring Valley additional effort was required in instructional planning and curriculum development. Administrators experienced immediate demands on their time,

particularly in scheduling students, teachers, and busses; communicating with staff by memo and meeting, overcoming emotional resistance to change; and dealing with questions of parents, students, and staff. According to administrators at Becky-David, less time was spent in long range planning.

Contracts were offered by the 45-15 districts to cover both the needs of the districts and the teachers. Prince William County offered a 241 day and a 191 day contract. Fifty-seven of the 65 participating teachers accepted the 241 day contract; 8 accepted the 191 day contract. Becky-David offered three contracts. 240 days with mandatory 3-week vacation, 180 days following vacation periods of the assigned group, and 180 days straight with the summer free. All but six intermediate teachers selected the 240 day contract; only 3 primary teachers selected the 240 day contract. In Valley View all teachers in the year-round program were evidently on a 240 day contract. Variable contracts were offered by Chula Vista.

Two districts collected data on teacher morale. La Mesa-Spring Valley asked teachers, students, administrators, and classified personnel if morale had improved under 45-15. Seventy-three percent indicated that it had. Chula Vista analyzed teacher sick leave and administered the Purdue Teacher Opinionaire to teachers. There were no significant differences between teachers in traditional 9-month schools and year-round schools.

Effects of YRE on Student Achievement

Quinmester. - One measure of student achievement is the number of students accelerating their programs and graduating early. In both the Dade County and Tri-districts programs, a large percentage of those attending the fifth

quin (1972) planned to accelerate. 34 percent in Dade County, 40 percent in Tri-districts. In Dade County, 429 students who took the fifth quin during the summer of 1971 graduated early.

The most that Dade County is willing to say about student achievement is that it is not adversely affected. Although their is some indication that quinmester schools scored higher than the county average in both reading and math on the Stanford Achievement Tests in 1972, this difference may be due to other factors. The quinmester schools scored lower than the County average in 1971.

Failure rates in five subject areas were also compared with Dade County averages. In 1971, the quinmester schools were below the average county failure rates in all five areas. In 1972, the quinmester schools were still below the average county rates but were closer to the county rates in language arts, science, and social studies.

Grades were used by both Dade County and Tri-districts as a measure of achievement. In the Tri-districts program students from Okemos and East Lansing maintained approximately the same grade point average (GPA). Students from Haslett, however, increased their average GPA by .5 of one point (2.5 to 3.0). Higher grades were reported for those attending the fifth quin in Dade County's program.

45-15 - The overall conclusion of the achievement studies in the 45-15 districts is that there is no apparent difference in achievement in math and reading for students in year-round and traditional nine-month schools. Some grade levels make more progress under the traditional 9-month program, others make more progress under the year-round program. A four-year longitudinal achievement study being conducted by the Research and Evaluation Division of Prince William County may add new evidence when it is completed in 1974.

Effects of YRE on the External Environment of the School

Quinmester - Students who accelerate their programs often graduate during the academic year. Colleges generally accept students only in September, thus causing a waiting period which detracts from one primary expected benefit of acceleration. Dade County indicates that this is not a deterrent, for the primary school accepting Dade County graduates has agreed to work with the County and students on early admission.

Students in Dade County did not utilize the fifth quin as a means of gaining employment in another quin. Twenty-five percent of the Tri-districts' students, however, indicated they were taking the fifth quin so they could work during another quin, thus providing a supply of cheap labor to local employers. Since these programs are small, little impact upon distribution of high school labor was evidenced.

45-15 - Limited data are available in this category. The Probinsky study in Prince William County is the most comprehensive. Her data indicate that 25 percent of the parents used community resources more under 45-15 than they did under the traditional nine month program; 71 percent used them less or the same. Twenty-four percent indicated they had more difficulty in scheduling family vacations; 74 percent had less or the same difficulty. Sixty-one percent indicated there were no recreational and amusement facilities available for children during vacation periods; 39 percent indicated that some were available. Increases in the costs of clothing, recreational activities, and vacations were perceived by 41 percent, 12 percent, and 10 percent respectively. Thirty-nine percent indicated that their churches did not reschedule religious activities and 32 percent indicated churches did not

reschedule recreational activities; only 6 percent indicated their churches did reschedule these activities while the majority indicated rescheduling of church activities did not apply to them.

In Valley View the Department of Parks and Recreation scheduled its activities to coincide with the 45-15 school program. Teachers, students, and parents (75%) in La Mesa-Spring Valley felt their vacation activities were more varied under 45-15. Sixty percent of the participating teachers, students, administrators, and classified personnel indicated that family life activities were unchanged by the La Mesa-Spring Valley 45-15 program. Parents in Chula Vista who had children in both the 45-15 and nine month programs indicated their vacation plans were disrupted.

Effects of YRE on Attitudes of Students, Teachers, and Parents

. Quinmester - Dade County principals felt they had fewer discipline problems under the quinmester plan. Teachers and students disagreed. A majority of students felt discipline was unrelated or they had no opinion. Teachers were about equally divided among fewer, more, and unchanged. Students felt they learned more under the quinmester plan. Teachers and principals felt the climate was more conducive to learning.

Attitudes of students participating in the quinmester program were favorable in both Dade County and Tri-districts. A majority in Dade County and 64 percent in Tri-districts expressed positive feelings toward the program. A majority of the teachers in Dade County held positive attitudes toward the plan. The fifteen teachers employed in the fifth quin in the Tri-districts program were very positive about their students and the total program.

Principals in Dade County reported that they felt a majority of the parents had positive attitudes toward the program and 79 percent of the students in the Tri-district program reported they felt their parents liked the program.

45-15 - Parents, students, and teachers participating in the 45-15 program are generally positive about the program. Table 2 indicates percentage of positive responses for each group by district.

It should be noted that the questions asked in each district varied in content. The intent, however, was to procure an indication of positive or negative attitudes. Further, the Gallup Poll questions differed by year. In 1970 the item was concerned with acceptance of the quarter plan; in 1971 the item was concerned with cutting school costs; and in 1972 the item was concerned with full building utilization by having students attend 180 days over the course of a year. Variations in response could well be due to the cues in the questions.

Three points should be emphasized. First, the difference in attitude of those participating in 45-15 programs and those not in programs should be noted. Those participating are more positive. There is also some indication that attitude becomes more positive the longer one is in a 45-15 program. Second, some districts experienced hostile attitudes. Valley View, for example, had several teachers who expressed hostility throughout their questionnaires. This may have been due to reduction in the length of contracts for teachers. Third, a high percentage of positive attitudes is to be expected in operational districts, regardless of the type of year-round program, because these districts would not have implemented any program without support of the various constituiences. Hunt's study provides strong evidence to support this statement.

T A B L E 2

Percentage of Parents, Teachers, Students with

Positive Attitudes Toward 45-15 Programs

		Parents	Students	Teachers
Prince William (in program)		82	75 (4th grade) 81 (7th grade)	75
Prince William (not in program)		52	51 (4th grade) 60 (7th grade)	87 (staff)
Northville (in program)		96	no data	100
Northville (not in program)		37	no data	no data
Becky--David		61	33.3 (from parents perception)	74.5
Chula Vista		79	65	5.6 on 7 point scale
National Gallup Poll	1970	39	40	no data
	1971	47	37	no data
	1972	50	no data	66
	1973	Not included in Gallup Poll		

Effects of YRE on Costs of Education

Quinmester - Both the Dade County and Tri-district programs are voluntary. As such, economical gains from full plant utilization cannot be expected. Only 16,276 students or 15.07% of the school population were registered in Dade County's fifth quin, 208 students were registered in the Tri-district program. To accrue economical gains from plant utilization, 80 percent of the students must enroll each quin.

45-15 - Savings in costs of education from 0 to 9.6 percent have been reported by 45-15 districts. Northville reported 5.1 percent; Prince William County reported 9.6 percent, Chula Vista reported no savings; and Roswell Independent School District projected a 3 percent savings. These operational savings were the result of more intense use of staff, equipment, supplies, materials, services, and transportation equipment and the housing of up to one-third more students.

In addition, since the reported programs are mandatory and one-third more students can be housed in the same facilities, construction costs can be deferred. For example, Northville projected a savings of $65,000,000 by the year 2000 with a projected enrollment of 25,000 students. Chula Vista projected savings of $2,000,000 for a new building which would have been required without the mandatory 45-15 program. It should be noted here that capital savings can be realized both in growing districts and those which need to close out-dated facilities.

Conclusions

A number of tentative conclusions can be derived from the foregoing data. However, one should be careful in making hard and fast statements

about the effects of year-round programs. The data are spotty and have been unsystematically collected. Few evaluation reports provide sufficient data to support conclusions. The reports of Prince William County, Chula Vista, and Dade County are, however, especially adequate.

(1) Curriculum and instructional changes either accompany or are forced upon school districts implementing year-round programs. The most common curriculum change is segmentation of courses into three or nine week units.

(2) Teachers and administrators experience role changes. In addition to more planning, record keeping, and curriculum development, teachers provide course guidance to students. Administrators spend more time dealing with immediate problems, scheduling, communicating, and overcoming resistance to change. They spend less time in long range planning.

(3) Students in year-round programs achieve no better nor worse than students in traditional nine month programs.

(4) The impact of year-round programs on family vacations varies, with parents in some districts reporting more disruption than parents in other districts. Both churches and parks and recreation departments need to further coordinate their programs with those of year-round schools. Increases can be expected in family budgets for clothing, vacation, and recreational activities when children move to year-round programs.

(5) Attitudes of students, teachers, and parents toward year-round programs are generally positive. Attitudes may become more positive with prolonged exposure to a year-round program.

(6) Voluntary quinmester programs do not save money. Mandatory 45-15 programs can save both operational and capital funds.

Future Research Needs

The research efforts cited in this paper need supplementation in a number of areas. The entire area needs to be mapped. The major variables and their relationships to each other need to be identified. Steps toward this end are being taken by the NISYRE at Virginia Polytechnic Institute and State University. Research on the spillover effects of YRE on economic, political, and religious institutions needs greater emphasis. The effects of YRE on decision-making, communication, interaction, influence, and goal-setting structures of YRE schools need consideration. Additional effort needs to be focused on compiling and integrating research findings into readable documents readily available to school policy makers.

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